

Claims

1. A receiving part (2) of a fluid plug-in coupling, comprising a socket housing (10) having a plug-in opening (12) for a plug part (4) and having a retaining device (14) for releasably fixing the plugged-in plug part (4) in place, the retaining device (14) having a retaining element (16) which is mounted in the socket housing (10) and has radially elastically deformable retaining sections (18) for latching engagement behind a radial retaining step (6) of the plug part (4), and a release element (20) which is secured in an axially displaceable manner relative to the socket housing (10) via latching means (22), the release element (20) engaging by means of an inner release section (24) in the plug-in opening (12) and, for release purposes, acting against the retaining sections (18) of the retaining element (16), which comprises a securing element (26) in such a manner that the release element (20) is blocked in a securing position against a release movement and is unblocked in an unblocking position for a release movement.

2. The receiving part as claimed in claim 1, wherein the securing element (26) and the release element (20) are moveable relative to each other between the securing position and the unblocking position, in particular are rotatable about the coupling axis (28).

3. The receiving part as claimed in claim 1 or 2, wherein the release section (24) of the release element (20) is designed as a hollow cylindrical inner sleeve and the securing element (26) is designed as a ring coaxially surrounding the inner sleeve.

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4. The receiving part as claimed in one of claims 1 to 3, wherein the release element (20) has at least one securing projection (30) which rests on an end surface

(32) of the securing element (26) in the securing position, and can be guided axially through a corresponding recess (34) of the securing element (26) in the unblocking position.

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5. The receiving part as claimed in claim 4, wherein the end surface (32) of the securing element (26) has a wavy contour in the direction of rotation in such a manner that a bearing region for the securing
10 projection (30) is formed in each case in the region of an axially recessed wave trough (36) and the recess for passing the securing projection (30) through is formed in each case in the region of an axially raised wave crest (38).

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6. The receiving part as claimed in one of claims 1 to 5, wherein the securing element (26) is connected, in particular in a rotationally fixed manner, preferably latched, to the socket housing (10).

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7. The receiving part as claimed in one of claims 1 to 6, wherein the release element (20) is indirectly secured in the socket housing (10) via the retaining element (16) and/or via the securing element (26).

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8. The receiving part as claimed in claim 7, wherein the retaining element (16) has at least one radial retaining arm (44) which engages in a retaining groove (46) formed on the outer circumference of the inner
30 sleeve (24).

9. The receiving part as claimed in one of claims 1 to 7, wherein the release element (20) is acted upon by a spring force (F) which acts axially in the release-
35 actuating direction.

10. The receiving part as claimed in claim 9, wherein the release element (20) has at least two axial

retaining arms (60) which are resilient in the radial direction and, with outer, cone-like oblique surfaces (68), interact radially with an inner bearing surface (66) of the securing element (26) to produce the axial
5 spring force (F).

11. The receiving part as claimed in claim 10, wherein the bearing surface (66) is part of a radially inwardly pointing annular collar (64) of the securing element
10 (26), the retaining arms (60) of the release element (20) preferably having latching lugs (62) on the end sides for securing the release element (20) against being pulled out, by bearing against the annular collar (64).

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12. The receiving part as claimed in one of claims 1 to 11, which comprises an integrated blocking valve (50) which automatically closes in the decoupled state and is opened by the plug part (4) being plugged in.

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13. The receiving part as claimed in claim 12, wherein the blocking valve (50) has a moveable valve element (52) with a bearing section (54) for the plug part (4).

25 14. The receiving part as claimed in claim 13, wherein the bearing section (54) is formed and guided within the socket housing (10) for the purpose of guiding the plug part (4).

30 15. The receiving part as claimed in claim 13 or 14, wherein the bearing section (54) is of essentially hollow cylindrical design and has an expanded holder (56) for a free end region of the plug part (4).

35 16. The receiving part as claimed in claim 13, wherein the valve element (52) interacts in its closed position with a sealing arrangement (70) which is also provided for sealing the plugged-in plug part (4).